



RESULTS FOR THE HEPOS CORS NETWORK PERFORMED BY THE LOCAL ANALYSIS CENTER OF THE IGN OF SPAIN (IGE)

This document provide the results of the HEPOS network in which the station 018B has been included in the combined final solution for 17 days. The network adjustment has been made keeping fixing only the AUT1 reference point ($X=4466283.3898$, $Y=1896166.9409$, $Z=4126096.7948$) in ITRF2005/2007.79, solutions are shown in annexe I and HEPOS_ITRF.CRD_v2 file, and the transformation from ITRF2005/2007.79 to ETRF2005/2007.5 have been done with parameters ($DX=0.3839\text{m}$, $DY=-0.2912\text{m}$, $DZ=-0.2361\text{m}$), coordinates are shown in Annexe II and HEPOS_ETRF.CRD_v2 file. Also the document provide a summary of the repeatability for the coordinates. Annexe III and file HEPOS.SUM.

Attached to this document the next files can be found:

- HEPOS_ITRF.CRD_v2, coordinates of the final combined solution in ITRF2005/2007.79
- HEPOS_ETRF.CRD_v2, coordinates of the final combined solution in ETRF2005/2007.5
- HEPOS.SNX, SINEX file with final standard deviations for each coordinate component for all stations and the variance factor (related with Chi-square) obtained.
- HEPOS.SUM, a summary file where repeatability RMS of the coordinates is shown. This is a more realistic assessment for the precision of the final combination solution than the standard deviations, because they are very optimistic.

In addition, table-1 with the main processing features has been updated.

Madrid, 14 de diciembre de 2007

CENTRO DE OBSERVACIONES GEODÉSICAS

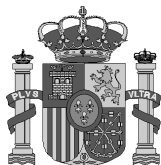
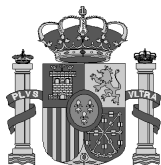


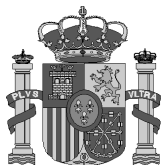
Table 1: Main processing features

MEASUREMENT MODELS	
Preprocessing	Phase preprocessing in a baseline by baseline mode using triple-differences. In most cases cycle slips are fixed looking simultaneously at different linear combinations of L1 and L2. If a cycle slip cannot be fixed reliably, bad data points are removed or new ambiguities are set up.
Basic Observable:	Carrier phase, code only used for receiver clock synchronization.
Elevation angle cutoff	3 degrees + elevation dependent weighting with cos-z
Data sampling	For ambiguity resolution 30 s. For final processing 180 s.
Baseline definition	Are choosing with the maximum common observation baselines algorithm.
Modeled observable	Double-differences, ionosphere-free linear combination.
Ground antenna phase center calibrations	Absolute antenna phase center corrections based on IGS05 model (exceptions for stations with individual absolute calibrations listed in epnc_05.atx) considering antenna radome codes. If antenna/radome pair has no available calibrations, the corresponding values for the radome code "NONE" are used.
Satellite antenna phase center calibrations	Absolute antenna phase centre corrections phase centre based on IGS05 model calibrations
Troposphere	Dry-Niell as a priori model, estimation of zenith delay corrections at 1-hour intervals for each station, using the wet-Niell MF, no a priori sigmas. Horizontal gradient parameter estimated/day/station (TILTING), no a priori constraints. Compute daily TRO files with fixed cumulative. Coordinates input from weekly solution.
Ionosphere	Regional ionospheric model calculated. Only used for QIF ambiguity resolution. Not modelled in final solution (ionosphere eliminated by forming the ionosphere-free linear combination of L1 and L2)
ESTIMATED PARAMETERS (APRIORI VALUES & SIGMAS)	
Adjustment	Weighted least-squares algorithms
Rejection Criteria	Daily RINEX observation files containing less than 10 percent of possible observation are ignored. The threshold value concerning data screening is 2.5 mm, specifically for a normalized, or L1 zero-difference zenith residual. Station where baseline data exceeding the overall sigma level of 5 millimeters is excluded.
Datum definition	<p>- For the first 14 days (7-20 October 2007). Eight stations are used for minimal constraints to ITRF2005.</p> <p>GLSV 12356M001 JOZE 12204M001 MATE 12734M008 NICO 14302M001 NOT1 12717M004 TRAB 20808M001 WTZR 14201M010 RAMO 20703S001</p> <p>- For the last 3 days (17-19 November 2007) to include the new station 018B. One station (AUT1) has been used for minimal constraints to ITRF2005 with coordinates provided by Dimitris Mastoris and velocities from EPN web page.</p> <p>- Finally, in the final combination with 17 days only station (AUT1) has been used for minimal constraints to ITRF2005 with coordinates provided by Dimitris Mastoris.</p> <p>- Later the final coordinates have been transformed to ETRF2005/2007.5 with the translation parameters provided by Dimitris Mastoris</p>



Troposphere	Absolute constraints: 5.0 m, Relative constraints: 5.0 m
Ionosphere	Regional ionospheric model for QIF ambiguity resolution.
Ambiguity resolution	Ambiguity resolution is performed by using the quasi-ionosphere-free (QIF) strategy with regional TEC information. Elevation angle cutoff :10 degrees
Satellite clock bias	Satellite clock biases are not estimated but eliminated by forming double-differences.
Receiver clock bias	Receiver clock corrections are estimated as part of the biases preprocessing using code measurements. They are finally eliminated by forming double differences.
Orbits and ERPs	IGS final orbit and ERP information
Planetary Ephemeris	DE200
Tidal	Solid earth tidal displacements are modeled according to displacements IERS conventions 1996
Ocean loading	Using Ocean-Loading-Model computed by H.G.Scherneck Onsala Space Observatory FES2004 model for each station
Atmospheric loading	No atmospheric loading corrections are taken into account.

geometrisis



Annexe I

combined 17 days

13-DEC-07 08:29

LOCAL GEODETIC DATUM: ITRF2005

EPOCH: 2007-10-14 0:00:00

NUM	STATION NAME	X (M)	Y (M)	Z (M)	FLAG
181	GLSV 12356M001	3512888.8981	2068979.9241	4888903.2298	A
133	JOZE 12204M001	3664940.1124	1409153.9109	5009571.4108	A
176	MATE 12734M008	4641949.5064	1393045.4871	4133287.5045	A
203	NICO 14302M001	4359415.6668	2874117.1084	3650777.8543	A
207	NOT1 12717M004	4934546.1783	1321265.0631	3806456.1613	A
322	TRAB 20808M001	3705250.3095	3084421.7435	4162044.8023	A
363	WTZR 14201M010	4075580.5083	931853.8483	4801568.1634	A
104	RAMO 20703S001	4514721.7956	3133507.8851	3228024.7529	A
112	ANKR 20805M002	4121948.5184	2652187.9081	4069023.7877	A
192	GRAZ 11001M002	4194423.7707	1162702.7483	4647245.4419	A
400	AUT1 12619M002	4466283.3898	1896166.9409	4126096.7948	W
401	NOA1 12620M001	4599641.9421	2034827.3483	3909890.6165	A
402	TUC2 12617M003	4744543.7857	2119411.9288	3686258.8154	A
208	ORID 15601M001	4498451.6475	1708267.0446	4173591.8917	A
1	001A 001A	4652928.6126	1800366.1739	3960523.2026	A
2	002A 002A	4667054.8586	1956061.1445	3869452.4968	A
3	003A 003A	4699506.6644	1911568.0696	3853190.3205	A
4	004A 004A	4684628.7714	1974427.0893	3839079.6479	A
5	005A 005A	4622226.9466	1776259.3098	4006676.4320	A
6	006A 006A	4616137.6745	2059760.6184	3876699.8593	A
7	007A 007A	4611005.8934	2008856.3007	3909149.4509	A
8	008A 008A	4591018.4130	2042230.0050	3915330.5290	A
9	009A 009A	4738874.7028	2008035.1337	3755149.0311	A
10	010A 010A	4647889.2888	2016373.1998	3861626.2738	A
11	011A 011A	4645937.3018	1907011.9075	3918883.6869	A
12	012A 012A	4654138.0384	1860563.9158	3931262.5095	A
13	013A 013A	4668680.5873	1898110.4864	3896938.8785	A
14	014A 014A	4600720.3944	1989592.1988	3931385.2994	A
15	015A 015A	4609055.1760	1931055.9965	3950707.6776	A
16	016A 016A	4543118.8408	1787921.9085	4091357.6057	A
17	017A 017A	4387956.8386	1972924.4797	4173574.8272	A
18	018A 018A	4384706.1822	2093640.4151	4118349.1789	A
99	018B 018B	4384712.5526	2093636.6780	4118344.1540	A
19	019A 019A	4351639.6776	2098545.0500	4150338.5262	A
20	020A 020A	4300660.3485	2133817.5259	4185046.0136	A
21	021A 021A	4278863.6012	2117731.8356	4215295.9598	A
22	022A 022A	4316917.6655	2107535.3176	4182191.0850	A
23	023A 023A	4582897.1097	2071411.4907	3909553.5690	A
24	024A 024A	4580192.8743	2005682.6218	3946577.1479	A
25	025A 025A	4557387.4424	2039873.5210	3955561.0184	A
26	026A 026A	4578469.0506	1941238.4235	3980607.1270	A
27	027A 027A	4621306.0434	1842074.7132	3979230.2433	A
28	028A 028A	4720317.0505	1797292.9518	3881778.2877	A
29	029A 029A	4710031.0571	1869466.2707	3860256.7177	A
30	030A 030A	4695504.4731	1827746.6153	3897484.6701	A
31	031A 031A	4472292.1323	1861913.7009	4134967.3112	A
32	032A 032A	4476241.0232	1900943.2051	4113187.4189	A
33	033A 033A	4449567.3813	1900755.5898	4141947.9369	A
34	034A 034A	4594021.5317	1760643.7187	4046428.8777	A
35	035A 035A	4592975.5208	1707979.0849	4069682.1643	A
36	036A 036A	4397396.7102	2014369.9355	4143761.5961	A
37	037A 037A	4415739.2624	1957234.8660	4151798.5134	A
38	038A 038A	4533403.3489	1753220.2910	4117205.9087	A
39	039A 039A	4625802.7773	1668232.7537	4048462.4815	A
40	040A 040A	4705726.7697	1761538.4067	3915539.7349	A
41	041A 041A	4432909.6690	1863642.4573	4176412.6587	A
42	042A 042A	4525121.2310	1811348.1277	4100960.2329	A



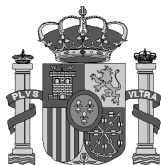
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DE FOMENTO

SUBSECRETARÍA

DIRECCIÓN GENERAL
DEL INSTITUTO
GEOGRÁFICO NACIONAL

SUBDIRECCIÓN GENERAL
DE ASTRONOMÍA
GEODESIA Y GEOFÍSICA

NUM	STATION NAME	X (M)	Y (M)	Z (M)	FLAG
43	043A 043A	4642072.0721	1947623.4195	3903423.6224	A
44	044A 044A	4577018.6692	2123302.0822	3889085.5645	A
45	045A 045A	4580335.9566	2174060.6953	3856968.1055	A
46	046A 046A	4603492.7332	2185789.8572	3822830.5568	A
47	047A 047A	4597987.5745	2232871.0121	3802726.5536	A
48	048A 048A	4641322.2182	2210169.0545	3762980.6673	A
49	049A 049A	4628538.5864	2185959.8327	3792621.1274	A
50	050A 050A	4659221.1668	2122704.1755	3790818.9569	A
51	051A 051A	4631240.1116	2111036.5832	3831488.8925	A
52	052A 052A	4602471.2927	2134196.6317	3852753.2959	A
53	053A 053A	4616311.8008	2165653.3300	3818783.9642	A
54	054A 054A	4736490.3352	1950656.2145	3787913.4264	A
55	055A 055A	4716078.6718	1948875.9378	3814009.8278	A
56	056A 056A	4711108.7122	1994031.4876	3796697.0508	A
57	057A 057A	4537319.0512	1854276.0049	4067914.4973	A
58	058A 058A	4530404.5620	1900461.2932	4054205.5120	A
59	059A 059A	4566605.0241	1884121.4624	4021225.2747	A
60	060A 060A	4658533.5849	1757145.9928	3973716.2594	A
61	061A 061A	4536020.2144	1993752.3218	4002861.7268	A
62	062A 062A	4537339.3967	1935583.8876	4030383.8959	A
63	063A 063A	4736778.6887	1879176.4649	3823310.5879	A
64	064A 064A	4739879.3537	1907506.1220	3805057.6808	A
65	065A 065A	4366396.6970	2026953.7717	4170200.3830	A
66	066A 066A	4477002.9242	1823650.2311	4146874.8657	A
67	067A 067A	4497876.8185	1866287.1520	4105434.0874	A
68	068A 068A	4625881.5698	1709107.0242	4031347.8837	A
69	069A 069A	4352712.7871	2056454.0527	4170037.6168	A
70	070A 070A	4417194.7806	1917186.9802	4168587.0741	A
71	071A 071A	4570576.2615	1832140.2166	4040483.1750	A
72	072A 072A	4596077.1860	1891693.2864	3984085.4560	A
73	073A 073A	4498891.9521	1762796.6761	4150371.0341	A
74	074A 074A	4481773.6820	1939023.5047	4089344.2717	A
75	075A 075A	4443689.8397	1955903.3346	4123220.8844	A
76	076A 076A	4469149.4408	1984586.8107	4081341.0028	A
77	077A 077A	4735441.6256	2202377.8442	3650161.8142	A
78	078A 078A	4709410.5008	2227222.6614	3667649.2634	A
79	079A 079A	4713360.8081	2265535.0372	3639151.1223	A
80	080A 080A	4689420.7919	2291403.3487	3654098.7010	A
81	081A 081A	4728856.6840	2183644.6158	3669216.6749	A
82	082A 082A	4751723.0714	2155409.0381	3656304.6358	A
83	083A 083A	4748474.8995	2128324.0266	3676064.7907	A
84	084A 084A	4758421.5846	2098625.6938	3680258.7839	A
85	085A 085A	4776189.8016	2095155.7300	3659113.5996	A
86	086A 086A	4550841.4423	2333566.7355	3798453.1206	A
87	087A 087A	4540046.7493	2414483.7162	3760862.0575	A
88	088A 088A	4563275.4561	2418284.6694	3730428.2822	A
89	089A 089A	4433023.0219	2086106.2203	4070183.3176	A
90	090A 090A	4441307.4564	2210069.3739	3995625.9219	A
91	091A 091A	4441648.3754	2176471.9084	4013982.3987	A
92	092A 092A	4520187.5899	2066263.8135	3984160.8039	A
93	093A 093A	4510706.3700	2281819.9322	3876825.7119	A
94	094A 094A	4544715.5373	2224737.1579	3870709.5226	A
95	095A 095A	4498770.8382	2206503.6798	3933149.7662	A
96	096A 096A	4625232.8068	2375202.8277	3682028.2307	A
97	097A 097A	4647712.2075	2159623.7985	3784451.2195	A
98	098A 098A	4604061.1998	2030937.6308	3906256.6481	A



Annexe II

COMPUTED FROM FILE: HEPOS_ITRF.CRD_v2

LOCAL GEODETIC DATUM: ETRF2005

EPOCH: 2007.5

NUM	STATION NAME	X (M)	Y (M)	Z (M)	FLAG
181	GLSV 12356M001	3512889.2820	2068979.6329	4888902.9937	A
133	JOZE 12204M001	3664940.4963	1409153.6197	5009571.1747	A
176	MATE 12734M008	4641949.8903	1393045.1959	4133287.2684	A
203	NICO 14302M001	4359416.0507	2874116.8172	3650777.6182	A
207	NOT1 12717M004	4934546.5622	1321264.7719	3806455.9252	A
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104	RAMO 20703S001	4514722.1795	3133507.5939	3228024.5168	A
112	ANKR 20805M002	4121948.9023	2652187.6169	4069023.5516	A
192	GRAZ 11001M002	4194424.1546	1162702.4571	4647245.2058	A
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401	NOA1 12620M001	4599642.3260	2034827.0571	3909890.3804	A
402	TUC2 12617M003	4744544.1696	2119411.6376	3686258.5793	A
208	ORID 15601M001	4498452.0314	1708266.7534	4173591.6556	A
1	001A 001A	4652928.9965	1800365.8827	3960522.9665	A
2	002A 002A	4667055.2425	1956060.8533	3869452.2607	A
3	003A 003A	4699507.0483	1911567.7784	3853190.0844	A
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6	006A 006A	4616138.0584	2059760.3272	3876699.6232	A
7	007A 007A	4611006.2773	2008856.0095	3909149.2148	A
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17	017A 017A	4387957.2225	1972924.1885	4173574.5911	A
18	018A 018A	4384706.5661	2093640.1239	4118348.9428	A
99	018B 018B	4384712.9365	2093636.3868	4118343.9179	A
19	019A 019A	4351640.0615	2098544.7588	4150338.2901	A
20	020A 020A	4300660.7324	2133817.2347	4185045.7775	A
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23	023A 023A	4582897.4936	2071411.1995	3909553.3329	A
24	024A 024A	4580193.2582	2005682.3306	3946576.9118	A
25	025A 025A	4557387.8263	2039873.2298	3955560.7823	A
26	026A 026A	4578469.4345	1941238.1323	3980606.8909	A
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28	028A 028A	4720317.4344	1797292.6606	3881778.0516	A
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30	030A 030A	4695504.8570	1827746.3241	3897484.4340	A
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32	032A 032A	4476241.4071	1900942.9139	4113187.1828	A
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36	036A 036A	4397397.0941	2014369.6443	4143761.3600	A
37	037A 037A	4415739.6463	1957234.5748	4151798.2773	A
38	038A 038A	4533403.7328	1753219.9998	4117205.6726	A
39	039A 039A	4625803.1612	1668232.4625	4048462.2454	A
40	040A 040A	4705727.1536	1761538.1155	3915539.4988	A
41	041A 041A	4432910.0529	1863642.1661	4176412.4226	A
42	042A 042A	4525121.6149	1811347.8365	4100959.9968	A
43	043A 043A	4642072.4560	1947623.1283	3903423.3863	A



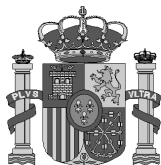
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NUM	STATION NAME	X (M)	Y (M)	Z (M)	FLAG
44	044A 044A	4577019.0531	2123301.7910	3889085.3284	A
45	045A 045A	4580336.3405	2174060.4041	3856967.8694	A
46	046A 046A	4603493.1171	2185789.5660	3822830.3207	A
47	047A 047A	4597987.9584	2232870.7209	3802726.3175	A
48	048A 048A	4641322.6021	2210168.7633	3762980.4312	A
49	049A 049A	4628538.9703	2185959.5415	3792620.8913	A
50	050A 050A	4659221.5507	2122703.8843	3790818.7208	A
51	051A 051A	4631240.4955	2111036.2920	3831488.6564	A
52	052A 052A	4602471.6766	2134196.3405	3852753.0598	A
53	053A 053A	4616312.1847	2165653.0388	3818783.7281	A
54	054A 054A	4736490.7191	1950655.9233	3787913.1903	A
55	055A 055A	4716079.0557	1948875.6466	3814009.5917	A
56	056A 056A	4711109.0961	1994031.1964	3796696.8147	A
57	057A 057A	4537319.4351	1854275.7137	4067914.2612	A
58	058A 058A	4530404.9459	1900461.0020	4054205.2759	A
59	059A 059A	4566605.4080	1884121.1712	4021225.0386	A
60	060A 060A	4658533.9688	1757145.7016	3973716.0233	A
61	061A 061A	4536020.5983	1993752.0306	4002861.4907	A
62	062A 062A	4537339.7806	1935583.5964	4030383.6598	A
63	063A 063A	4736779.0726	1879176.1737	3823310.3518	A
64	064A 064A	4739879.7376	1907505.8308	3805057.4447	A
65	065A 065A	4366397.0809	2026953.4805	4170200.1469	A
66	066A 066A	4477003.3081	1823649.9399	4146874.6296	A
67	067A 067A	4497877.2024	1866286.8608	4105433.8513	A
68	068A 068A	4625881.9537	1709106.7330	4031347.6476	A
69	069A 069A	4352713.1710	2056453.7615	4170037.3807	A
70	070A 070A	4417195.1645	1917186.6890	4168586.8380	A
71	071A 071A	4570576.6454	1832139.9254	4040482.9389	A
72	072A 072A	4596077.5699	1891692.9952	3984085.2199	A
73	073A 073A	4498892.3360	1762796.3849	4150370.7980	A
74	074A 074A	4481774.0659	1939023.2135	4089344.0356	A
75	075A 075A	4443690.2236	1955903.0434	4123220.6483	A
76	076A 076A	4469149.8247	1984586.5195	4081340.7667	A
77	077A 077A	4735442.0095	2202377.5530	3650161.5781	A
78	078A 078A	4709410.8847	2227222.3702	3667649.0273	A
79	079A 079A	4713361.1920	2265534.7460	3639150.8862	A
80	080A 080A	4689421.1758	2291403.0575	3654098.4649	A
81	081A 081A	4728857.0679	2183644.3246	3669216.4388	A
82	082A 082A	4751723.4553	2155408.7469	3656304.3997	A
83	083A 083A	4748475.2834	2128323.7354	3676064.5546	A
84	084A 084A	4758421.9685	2098625.4026	3680258.5478	A
85	085A 085A	4776190.1855	2095155.4388	3659113.3635	A
86	086A 086A	4550841.8262	2333566.4443	3798452.8845	A
87	087A 087A	4540047.1332	2414483.4250	3760861.8214	A
88	088A 088A	4563275.8400	2418284.3782	3730428.0461	A
89	089A 089A	4433023.4058	2086105.9291	4070183.0815	A
90	090A 090A	4441307.8403	2210069.0827	3995625.6858	A
91	091A 091A	4441648.7593	2176471.6172	4013982.1626	A
92	092A 092A	4520187.9738	2066263.5223	3984160.5678	A
93	093A 093A	4510706.7539	2281819.6410	3876825.4758	A
94	094A 094A	4544715.9212	2224736.8667	3870709.2865	A
95	095A 095A	4498771.2221	2206503.3886	3933149.5301	A
96	096A 096A	4625233.1907	2375202.5365	3682027.9946	A
97	097A 097A	4647712.5914	2159623.5073	3784450.9834	A
98	098A 098A	4604061.5837	2030937.3396	3906256.4120	A



Annexe III

Combined 14 days y 018B

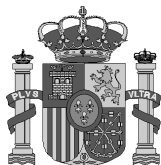
13-DEC-07 08:29

Total number of stations: 113

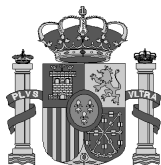
Station	#Days	Weekday 0123456	Repeatability (mm)		
			N	E	U
001A 001A	14	XXXXXXX XXXXXXX	1.15	1.74	3.32
002A 002A	14	XXXXXXX XXXXXXX	1.32	1.98	4.71
003A 003A	14	XXXXXXX XXXXXXX	0.60	1.97	3.28
004A 004A	14	XXXXXXX XXXXXXX	1.24	1.75	3.35
005A 005A	14	XXXXXXX XXXXXXX	1.11	1.86	6.05
006A 006A	14	XXXXXXX XXXXXXX	0.92	1.76	4.34
007A 007A	14	XXXXXXX XXXXXXX	1.46	1.91	5.26
008A 008A	14	XXXXXXX XXXXXXX	1.19	1.74	5.39
009A 009A	14	XXXXXXX XXXXXXX	1.68	1.94	5.95
010A 010A	14	XXXXXXX XXXXXXX	1.61	2.01	4.03
011A 011A	14	XXXXXXX XXXXXXX	1.01	1.86	4.05
012A 012A	14	XXXXXXX XXXXXXX	1.15	2.31	5.37
013A 013A	14	XXXXXXX XXXXXXX	0.92	1.84	4.70
014A 014A	14	XXXXXXX XXXXXXX	1.07	2.09	4.67
015A 015A	14	XXXXXXX XXXXXXX	1.33	1.47	3.77
016A 016A	14	XXXXXXX XXXXXXX	1.15	2.11	6.25
017A 017A	14	XXXXXXX XXXXXXX	1.09	1.70	4.53
018A 018A	14	XXXXXXX XXXXXXX	1.02	2.51	7.64
018B 018B	3		1.93	0.89	1.43
019A 019A	17	XXX XXXXXXX XXXXXXX XXX	1.24	1.54	4.07
020A 020A	14	XXXXXXX XXXXXXX	1.10	1.58	4.91
021A 021A	14	XXXXXXX XXXXXXX	0.84	1.60	5.01
022A 022A	14	XXXXXXX XXXXXXX	1.28	1.59	4.82
023A 023A	14	XXXXXXX XXXXXXX	1.70	2.54	5.88
024A 024A	14	XXXXXXX XXXXXXX	1.35	1.82	4.05
025A 025A	14	XXXXXXX XXXXXXX	2.36	1.53	4.38
026A 026A	14	XXXXXXX XXXXXXX	1.09	1.71	4.41



Station	#Days	Weekday 0123456	Repeatability (mm)		
			N	E	U
027A 027A	14	XXXXXXXX XXXXXXXX	1.17	2.11	6.88
028A 028A	14	XXXXXXXX XXXXXXXX	1.36	2.30	5.19
029A 029A	14	XXXXXXXX XXXXXXXX	1.33	1.84	4.33
030A 030A	14	XXXXXXXX XXXXXXXX	1.13	1.76	4.63
031A 031A	14	XXXXXXXX XXXXXXXX	0.93	1.69	4.78
032A 032A	14	XXXXXXXX XXXXXXXX	1.12	1.61	4.71
033A 033A	14	XXXXXXXX XXXXXXXX	1.03	1.63	3.89
034A 034A	14	XXXXXXXX XXXXXXXX	1.03	1.96	4.85
035A 035A	14	XXXXXXXX XXXXXXXX	0.86	1.56	4.76
036A 036A	17	XXXXXXXX XXXXXXXX XXX	1.40	1.78	4.79
037A 037A	14	XXXXXXXX XXXXXXXX	1.00	1.62	4.02
038A 038A	14	XXXXXXXX XXXXXXXX	1.33	1.97	6.09
039A 039A	14	XXXXXXXX XXXXXXXX	1.32	2.11	3.84
040A 040A	14	XXXXXXXX XXXXXXXX	1.15	1.78	4.74
041A 041A	14	XXXXXXXX XXXXXXXX	0.84	1.75	4.37
042A 042A	14	XXXXXXXX XXXXXXXX	1.11	1.93	4.63
043A 043A	14	XXXXXXXX XXXXXXXX	1.41	1.68	6.23
044A 044A	14	XXXXXXXX XXXXXXXX	1.56	2.00	6.54
045A 045A	14	XXXXXXXX XXXXXXXX	1.20	2.11	5.84
046A 046A	14	XXXXXXXX XXXXXXXX	1.65	1.77	5.46
047A 047A	14	XXXXXXXX XXXXXXXX	1.39	2.28	7.98
048A 048A	14	XXXXXXXX XXXXXXXX	1.56	2.13	7.69
049A 049A	14	XXXXXXXX XXXXXXXX	1.22	2.01	4.41
050A 050A	11	X X XX XXXXXXXX	1.48	2.09	3.84
051A 051A	14	XXXXXXXX XXXXXXXX	1.38	2.07	4.96
052A 052A	14	XXXXXXXX XXXXXXXX	1.38	1.81	5.14
053A 053A	14	XXXXXXXX XXXXXXXX	1.06	1.95	4.09
054A 054A	14	XXXXXXXX XXXXXXXX	1.53	2.01	4.58
055A 055A	14	XXXXXXXX XXXXXXXX	1.08	2.01	6.17
056A 056A	14	XXXXXXXX XXXXXXXX	1.40	1.80	5.16



Station	#Days	Weekday 0123456	Repeatability (mm)		
			N	E	U
057A 057A	14	XXXXXXX XXXXXXX	1.21	1.94	4.93
058A 058A	14	XXXXXXX XXXXXXX	1.54	1.76	4.91
059A 059A	14	XXXXXXX XXXXXXX	1.29	2.20	6.31
060A 060A	14	XXXXXXX XXXXXXX	1.26	2.00	4.47
061A 061A	14	XXXXXXX XXXXXXX	1.26	1.86	4.83
062A 062A	14	XXXXXXX XXXXXXX	1.45	2.31	6.62
063A 063A	8	XXXX XXXX	0.94	1.44	6.20
064A 064A	13	XXX XXX XXXXXXX	1.46	2.22	7.14
065A 065A	14	XXXXXXX XXXXXXX	1.11	1.41	4.20
066A 066A	14	XXXXXXX XXXXXXX	1.22	1.69	4.24
067A 067A	14	XXXXXXX XXXXXXX	0.91	1.80	3.52
068A 068A	14	XXXXXXX XXXXXXX	1.89	1.84	3.26
069A 069A	17	XXXXXXX XXXXXXX XXX	1.66	1.59	4.88
070A 070A	14	XXXXXXX XXXXXXX	1.01	1.55	4.45
071A 071A	14	XXXXXXX XXXXXXX	1.44	1.65	4.16
072A 072A	14	XXXXXXX XXXXXXX	1.14	1.93	4.15
073A 073A	14	XXXXXXX XXXXXXX	0.97	1.75	5.08
074A 074A	14	XXXXXXX XXXXXXX	1.31	1.80	3.71
075A 075A	14	XXXXXXX XXXXXXX	1.22	1.74	4.04
076A 076A	14	XXXXXXX XXXXXXX	1.21	2.12	4.09
077A 077A	14	XXXXXXX XXXXXXX	1.23	2.39	4.23
078A 078A	14	XXXXXXX XXXXXXX	1.24	1.76	6.49
079A 079A	14	XXXXXXX XXXXXXX	1.68	2.35	6.63
080A 080A	14	XXXXXXX XXXXXXX	2.08	1.95	5.53
081A 081A	14	XXXXXXX XXXXXXX	1.05	2.00	5.13
082A 082A	14	XXXXXXX XXXXXXX	3.57	2.14	6.74
083A 083A	14	XXXXXXX XXXXXXX	1.78	3.04	6.54
084A 084A	14	XXXXXXX XXXXXXX	1.05	2.03	6.76
085A 085A	14	XXXXXXX XXXXXXX	1.43	2.11	5.64
086A 086A	14	XXXXXXX XXXXXXX	1.20	1.74	5.64



Station	#Days	Weekday 0123456	Repeatability (mm)		
			N	E	U
087A 087A	14	XXXXXXXX XXXXXXXX	1.33	1.86	5.45
088A 088A	14	XXXXXXXX XXXXXXXX	1.60	1.54	8.58
089A 089A	17	XXXXXXXX XXXXXXXX XXX	1.43	1.75	4.65
090A 090A	14	XXXXXXXX XXXXXXXX	1.72	2.18	6.45
091A 091A	14	XXXXXXXX XXXXXXXX	1.40	1.97	3.99
092A 092A	14	XXXXXXXX XXXXXXXX	1.39	1.80	4.77
093A 093A	14	XXXXXXXX XXXXXXXX	1.39	2.21	8.26
094A 094A	14	XXXXXXXX XXXXXXXX	1.52	1.73	5.16
095A 095A	14	XXXXXXXX XXXXXXXX	1.24	1.44	3.87
096A 096A	14	XXXXXXXX XXXXXXXX	1.21	2.05	5.83
097A 097A	2	XX	0.72	2.19	6.50
098A 098A	14	XXXXXXXX XXXXXXXX	1.21	1.43	5.53
ANKR 20805M002	12	XXXXXXXX X XXXX	0.96	1.55	4.47
AUT1 12619M002	17	XXXXXXXX XXXXXXXX XXX	0.00	0.01	0.00
GLSV 12356M001	14	XXXXXXXX XXXXXXXX	2.13	1.94	3.91
GRAZ 11001M002	14	XXXXXXXX XXXXXXXX	1.41	1.86	3.88
JOZE 12204M001	6	XXXXX X	1.55	2.23	5.19
MATE 12734M008	14	XXXXXXXX XXXXXXXX	1.33	2.20	4.10
NICO 14302M001	6	XXXX XX	0.69	1.91	4.64
NOA1 12620M001	14	XXXXXXXX XXXXXXXX	1.40	2.91	4.73
NOT1 12717M004	7	XX XXXXX	0.44	1.88	5.12
ORID 15601M001	13	XXXXXXXX X XXXXX	3.86	2.65	4.60
RAMO 20703S001	14	XXXXXXXX XXXXXXXX	1.71	2.40	6.78
TRAB 20808M001	11	XXXXXXXX X XXX	1.23	2.07	5.17
TUC2 12617M003	14	XXXXXXXX XXXXXXXX	1.86	2.54	5.08
WTZR 14201M010	14	XXXXXXXX XXXXXXXX	2.35	2.13	5.09
Total	1535		1.41	1.94	5.16